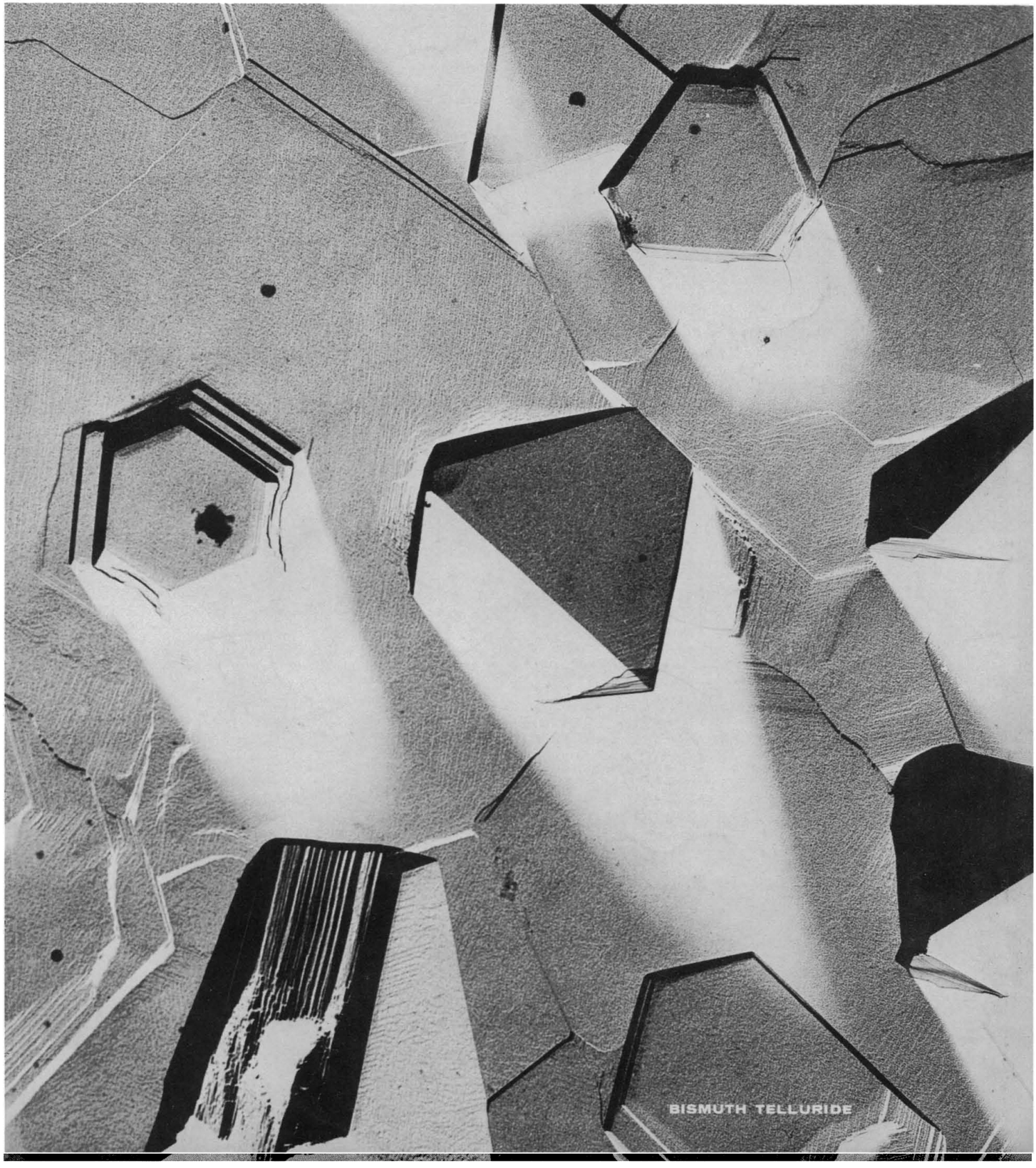
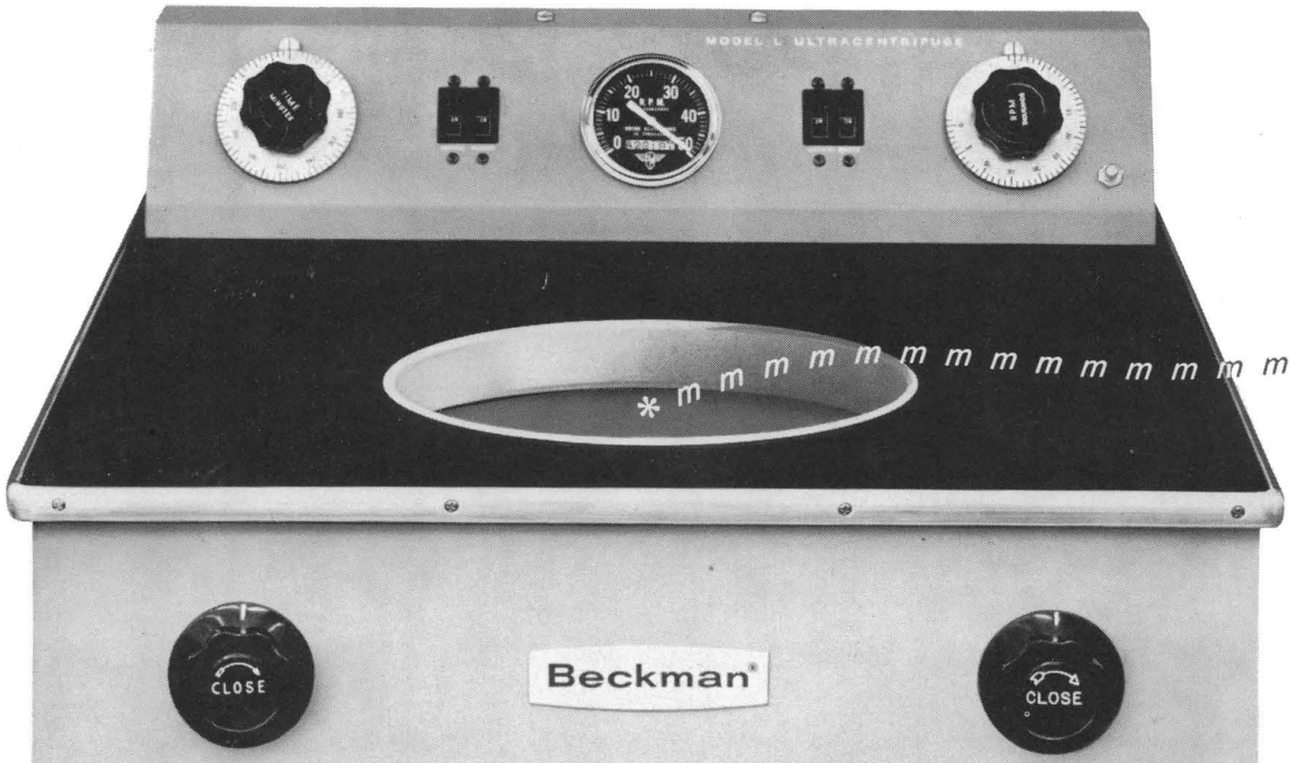
SCIENCE

26 July 1963

Vol. 141, No. 3578

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE





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26 July 1963
Vol. 141, No. 3578

SCIENCE

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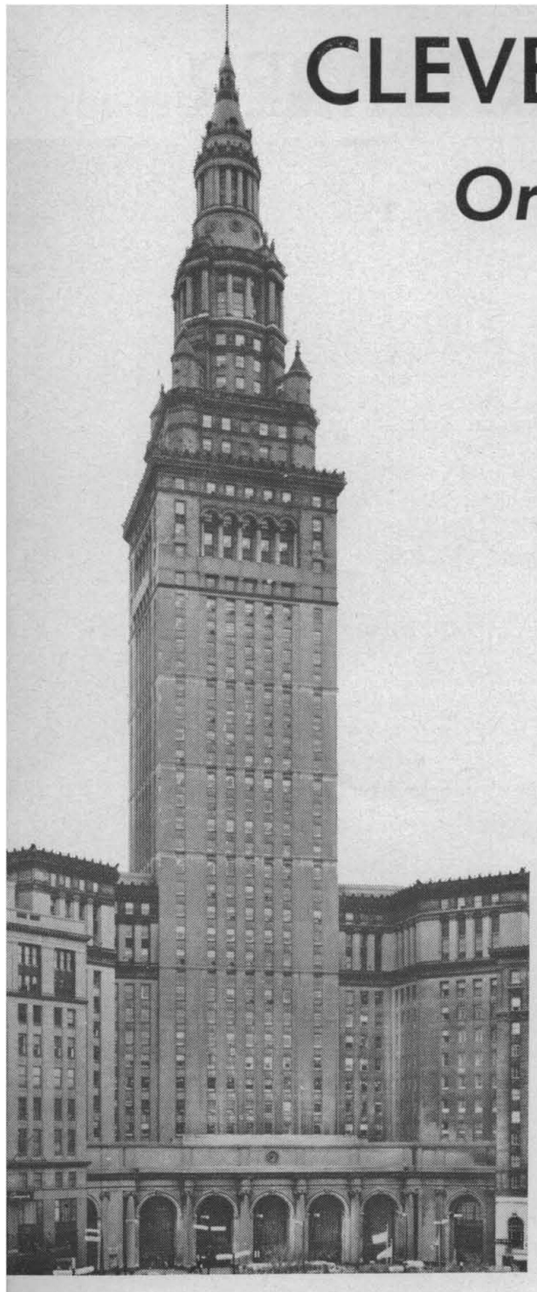
COVER

Single-crystal regions in a sputtered film of the thermoelectric compound, bismuth telluride. The film (approximately 3 microns thick) is grown by bombarding a cathode source of the compound with ionized atoms of argon. Under these conditions, the stoichiometry of the compound is preserved. The very narrow striae correspond to crystal growth steps approximately 30 angstroms in height. See page 364. [M. H. Francombe, Philco Scientific Laboratory]



CLEVELAND • 130th AAAS

Order Your General Program

It provides complete, detailed information about all the sessions and symposia scheduled, the Annual Exposition of Science and Industry, and the Science Theatre.

Program Highlights

Moving Frontiers of Science A. M. Gleason on nature and direction of current mathematical research; A. L. Schawlow on infrared optical masers; V. G. Dethier on biology of behavior; Gordon J. F. MacDonald on deep structure of continents and ocean basins.

Interdisciplinary Symposia AAAS day: Uses of lasers and masers; philosophical aspects of present-day cosmogony and cosmology; developmental aspects of immunity; biological and sociological research on the effects of human reproduction control; the federal government, science, and the universities.

Special Sessions AAAS Presidential Address by Paul Gross; the AAAS Distinguished Lecture by J. K. Galbraith; the Joint Address of Sigma Xi and Phi Beta Kappa by Paul Sears; the George Sarton Memorial Lecture; and the National Geographic Society Illustrated Lecture.

Other General Events Three-session symposium on Japanese science sponsored jointly by the Science Council of Japan and the AAAS. Two symposia sponsored by the Office of Economic and Statistical Studies of the National Science Foundation: Planning and administration of scientific research programs, and nontechnical aspects of instrumentation and equipment in research and development.

AAAS Committees Sessions of the Cooperative Committee on the Teaching of Science and Mathematics, the Committee on Science in the Promotion of Human Welfare, and perhaps others.

Sections and Societies The 20 AAAS Sections and some 70 participating societies are scheduling specialized symposia, and many have sessions for contributed papers.

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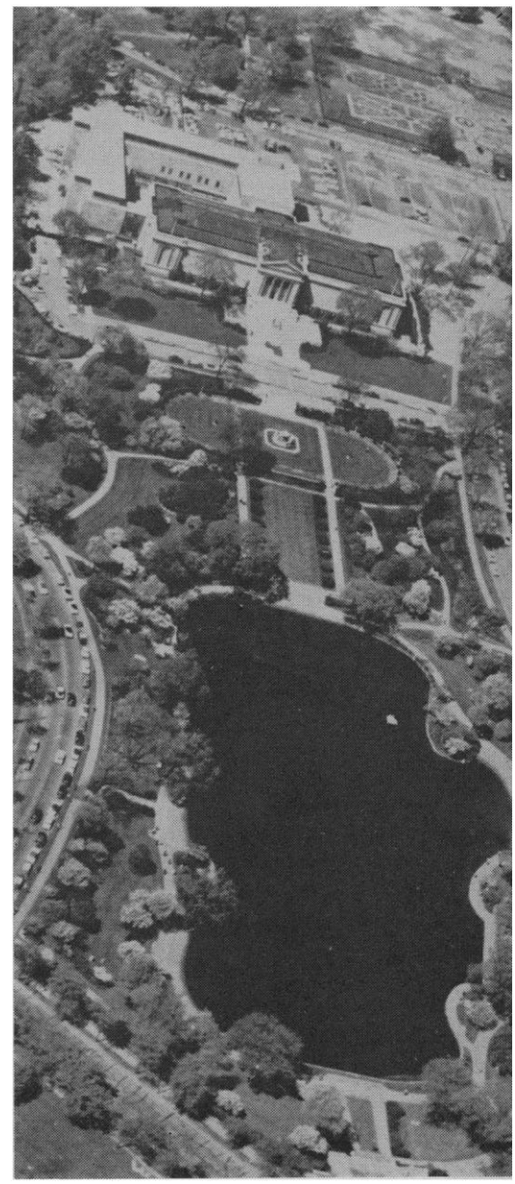
MEETING • 26-30 DECEMBER

Reserve Your Hotel Room

Make sure you have the accommodations you prefer. A list of headquarters hotels of participating societies appears on page 280 Science, 19 July. The AAAS headquarters is the Sheraton-Cleveland.



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Statler-Hilton	8.50	14.00	15.50	28.00— 59.00
Manger	7.50	13.00	14.50	25.00— 35.00
Pick-Carter	7.50	13.00	14.50	32.50— 60.00
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(List name and address of each person, including yourself. Attach list if space is insufficient.)

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DATES: ARRIVAL ..... A.M. .....P.M.....DEPARTURE .....
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(Individual requesting reservation) (Please print or type)

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(Street) (City and Zone) (State)

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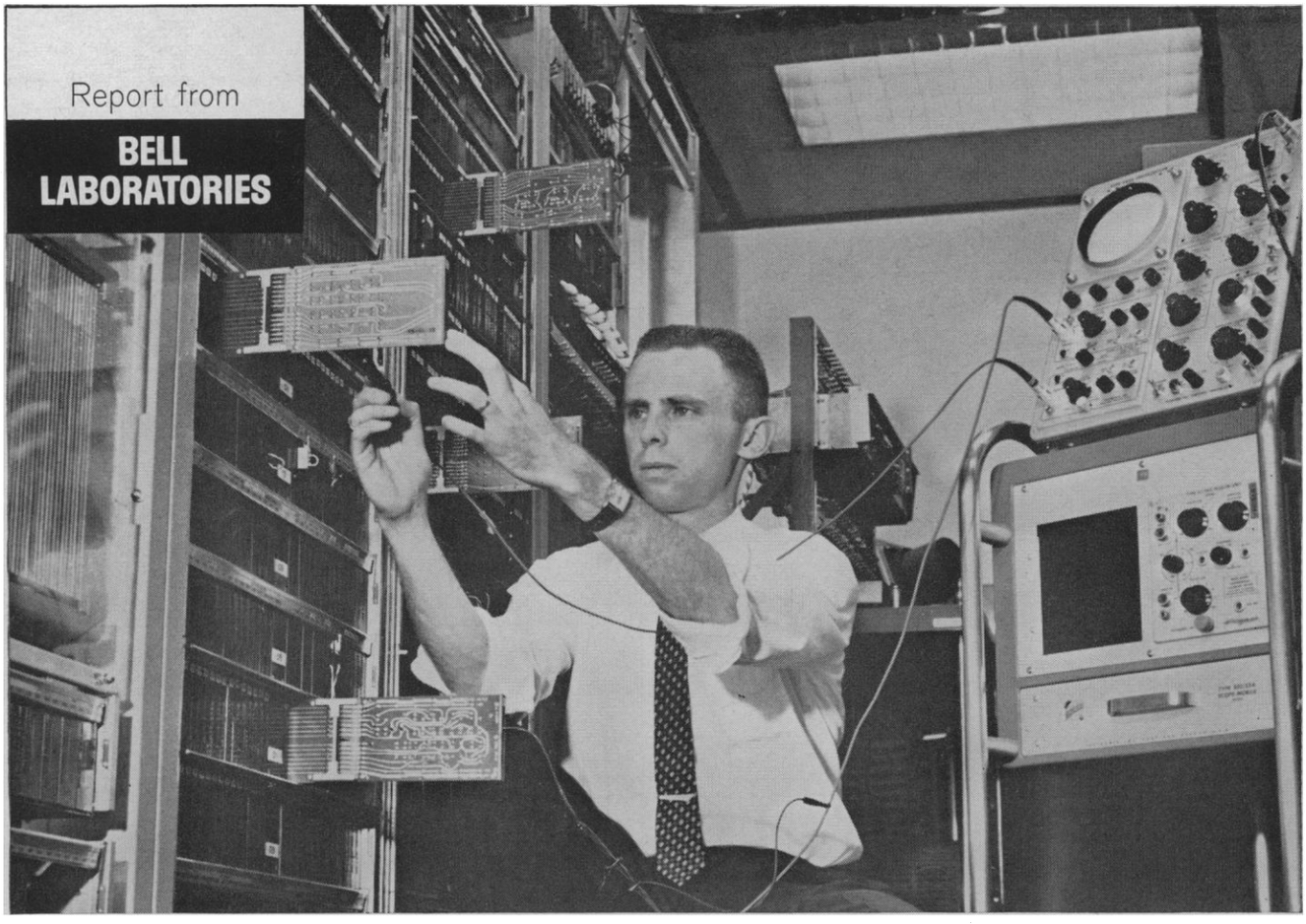

Bell Laboratories' E. G. Hughes tests printed circuit boards in experimental central office control equipment for 101-Electronic Switching System. The system automatically detects trouble, switching out a defective unit and switching in a duplicate unit so service is not interrupted.

High-Speed Switching System Provides New Telephone Services for Business

A new electronic switching system designed to meet the special needs of business customers has been developed at Bell Telephone Laboratories. This system provides many new telephone services such as a way for reaching a seven- or ten-digit number by dialing only three digits, setting up conference calls by dialing other customers into the conversation, and automatically transferring incoming calls from your phone to another by predialing special codes.

A notable feature of the new system is a high-speed control unit. Operating from a telephone switching center, the unit scans—thousands of times per second—all the telephone connections in dozens of business offices that may be located many miles apart. It spends only two-thousandths of a second in each office, but in that time it determines what has to be done and arranges for the necessary actions.

Another feature of the new system is the high-capacity memory. From this, the control unit can draw, in eight-millionths of a second, such specific instructions as how to handle a certain call.

The new switching system operates compatibly with existing electromechanical switching systems in the Bell System. Such Bell Laboratories inventions as the transistor are indispensable to its compactness and the high reliability of its operation. The system was developed for use by businesses as a private branch exchange, and a model has been installed by Western Electric for trial by two New Brunswick, New Jersey, companies.

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Instructions for Contributors

The Editors of *Science*

General Editorial Policies

All papers submitted are considered for publication and acknowledged on receipt. Most are sent to two or more outside reviewers for evaluation of their significance and soundness. The author's membership or lack of membership in the AAAS is not a factor in selection. Papers are accepted with the understanding that they have not been published, submitted, or accepted for publication elsewhere. However, short reports of important findings may be acceptable if they can be published in *Science* before the complete results are published in a specialty journal. Authors will usually be notified of acceptance, rejection, or need for revision in 10 days to 3 weeks.

Types of papers. Three types of unsolicited, signed papers are published: Articles, Reports, and Letters. Meeting Reports and Book Reviews are solicited. Familiarize yourself with the general form of the type of paper you wish to submit by looking over a recent issue of the journal, and then follow the instructions for that type of paper.

Proofs. One set of galley proofs is provided for each paper. Keep alterations to a minimum, and mark them only on the galley, not on the manuscript. Extensive alterations may delay publication by a week or two. Heavily edited papers are returned to the author for approval before type is set.

Reprints. Reprints are provided at cost. An order blank accompanies proofs.

Writing Papers

Organize your material carefully, putting the news of your finding or a statement of the problem first, supporting details and arguments second. Make sure that the significance of your work will be apparent to readers outside your field, even if you feel you are explaining too much to your colleagues. Present each step in terms of the purpose it serves in supporting your finding or solving the problem. Avoid chronological steps, for the purpose of the steps may not be clear to the reader until he finishes reading the paper.

Provide enough details of method and equipment so that another worker can repeat your work, but omit minute and comprehensive details which are generally known or which can be covered by citation of another paper. Use metric units of measure. If measurements were made in English units, give metric equivalents.

Avoid specialized laboratory jargon and abbreviations, but use technical terms as necessary, defining those likely to be known only in your field. Readers will skip a paper they do not understand. They should not be expected to consult a technical dictionary.

Choose the active voice more often than you choose the passive, for the passive voice usually requires more words and often obscures the agent of action. Use first person, not third; do not use first person plural when singular is appropriate. Use a good general style manual, not a specialty style manual. The University of Chicago style manual, the style manual of the American Institute of Physics, and the *Style Manual for Biological Journals*, among others, are appropriate.

Manuscripts

Prepare your manuscript in the form used by *Science*. Use a good bond paper for the first copy. Submit two carbons. Do not use "erasable" or thin paper for the first copy. Double space title, abstract, text, signature, address, references (including the lines of a single reference), figure legends, tables (including titles, column headings, body, and footnotes). Do not use single spacing anywhere. Put the name of the first author and the page number in the upper righthand corner of every page.

Paging. Use a separate page for the title: number it page 1. Begin each major section—text, references and notes, and figure legends—on a new sheet. Put each table on a separate sheet. Place figure legends and tables after the references.

Titles. Begin the title with a word useful in indexing and information retrieval (not "Effect" or "New").

References and Notes. Number all references to the literature, footnotes, and acknowledgments in a single sequence in the order in which they are cited in the text. Gather all acknowledgments into a single citation, and keep them short ("I thank," not "I wish to thank"). Cite all references and notes but do not cite them in titles or abstracts. Cite several under one number when feasible. Use *Chemical Abstracts List of Periodicals* for abbreviations of journal names. If the journal is not listed there, provide the full name. Use the following forms:

Journal: H. Smith, *Am. J. Physiol.* **98**, 279 (1931).

Book: F. Dachille and R. Roy, *Modern Very High Pressure Techniques* (Butterworth, London, 1961), pp. 163–180.

Chapter: F. Dachille and R. Roy, in *Reactivity of Solids*, J. H. De Boer, Ed., (Elsevier, Amsterdam, 1960), p. 502.

Illustrations. Submit three copies of each diagram, graph, map, or photograph. Cite all illustrations in the text and provide a brief legend, to be set in type, for each. Do not combine line drawings and photographs in one illustration. Do not incorporate the legend in the figure itself. Use India ink and heavy white paper or blue-lined coordinate paper for line drawings and graphs. Use heavier lines for curves, than you use for the axes. Place labels parallel to the axes, using capital and lower-case letters: put units of measurement in parentheses after the label —for example, Time (sec). Plan your figures for the smallest possible printed size consistent with clarity.

Photographs should have a glossy finish, with sharp contrast between black and white areas. Indicate magnification with a scale line on the photograph.

Tables. Type each table on a separate sheet, number it with an arabic numeral, give it a title, and cite it in the text. Double space throughout. Give each column a heading. Indicate units of measure in parentheses in the heading for each column. Do not change the unit of measure within a

column. Do not use vertical rules. Do not use horizontal rules other than those in the heading and at the bottom. A column containing data readily calculated from data given in other columns can usually be omitted; if such a column provides essential data, the columns containing the other data can usually be omitted.

Plan your table for small size. A one-column table may be up to 42 characters wide. Count characters by counting the widest entry in each table column (whether in the body or the heading) and allow three characters for spaces between table columns. A two-column table may be 90 characters wide.

Equations and formulas. Use quadruple spacing around all equations and formulas that are to be set off from the text. Most should be set off. Start them at the left margin. Use the solidus for simple fractions, adding the necessary parentheses. But if braces and brackets are required, use built-up fractions. Identify hand-written symbols in the margin, and give the meaning of all symbols and variables in the text immediately after the equation.

Articles

Articles may range in length from 2000 to 5000 words. Write them clearly in reasonably nontechnical language. Provide a title of one or two lines of up to 26 characters per line and a subtitle consisting of a complete sentence in two lines with a character count between 95 and 105 for the sentence (spaces between words count as one character each). Do not break words at the ends of lines. Write a brief author note, giving your position and address. Do not include acknowledgments. Place title, subtitle, and author note on page 1. Begin the text on page 2.

Insert subheads at appropriate places in the text, averaging about one subhead for each three manuscript pages. Keep them short—up to 35 characters and spaces. Do not use more than one degree or level of subheads.

Provide a summary at the end.

Do not submit more than one illustration (table or figure) for each 800 words unless you have planned carefully for grouping. With such planning, many illustrations can be accommodated in one article. Consult the editorial office for help in planning.

Particularly good photographs suitable for use on the cover are desired if they can be published in connection with an article.

Articles in the series on Current Problems in Research are usually solicited. Each is focused on a problem and the mode by which it is being attacked but presents enough of the background and state of knowledge in the field to let the reader appreciate the significance of the problem under discussion.

Reports

Short announcements of current research results are published in the Reports section. A report should have news value for the scientific community or be of unusual interest to the specialist or of broad interest because of its interdisciplinary nature. It should contain solid research results or reliable theoretical calculations. Speculation should be limited and is permissible only when accompanied by solid work. The preferred length is 600 to 1200 words, but longer papers can be accommodated if the extra length is necessary to present the news. Limit illustrative material (tables and figures) to one item of two-column width or to two items of one-column width. More *can* be accommodated, but papers with limited amounts of illustrative material (preferably one column wide) can be published most expeditiously.

Title. Begin the title with an important word (preferably a noun) that is likely to be useful to indexers. The title may be a conventional one (composed primarily of nouns and adjectives), a sentence (containing a verb), or a structure with a colon (Nictitating Membrane: Classical Conditioning and Extinction in the Albino Rabbit). Limit it to three lines of complete words of no more than 32 characters per line (spaces between words count as one character each). Do not use abbreviations. Type the title in the middle of page 1.

Abstract. Provide an abstract of 45 to 55 words on page 2. The abstract should amplify the title but should not repeat it or phrases in it. Qualifying words for terms used in the title may be used. Tell the results of the work, but not in terms such as "———" "was found" or "is described" or "is presented."

Text. Begin the text on page 3. Put the news first. Do not refer to unpublished work or discuss your plans for further work. If your paper is a short report of work covered in a longer paper to be published in a specialty journal, you may refer to this paper if it has been accepted. Name the journal. If the manuscript has not been accepted, refer to it as "in preparation." Omit references to private communications. Do not use subheads.

Signature. List the authors on the last page of the text and give a simple mailing address.

Received dates. Each report will be dated the day an acceptable version is received in the editorial office.

Letters

The Letters section provides a forum. Letters may be comments on material already published or expressions of opinion about any question of interest to scientists. No illustrations are used. Technical comments and letters containing data will be considered for publication as reports.

Letters will be judged only on clarity of expression and interest to the scientific public. Keep them short and to the point; the preferred length is 250 words, but longer letters may be accepted. The editors may shorten letters. Proofs are not furnished to authors; reprints are not available.

Meeting Reports

Meeting reports should summarize a few of the most important scientific results and give an interpretation of them in terms that can be understood by a wider audience than that represented by those who attended the symposium. Focus your report on events that will have interest, news value, and significance to an audience of varied background. A definitive report is not possible, and a catalog of who spoke on what subject is dull.

Book Reviews

Book reviews for *Science* are solicited. Describe, appraise, and evaluate the book. Write for a general scientific audience. Consider the book's scope, purpose, contents, and potential usefulness, and state your opinion of the book clearly and concisely.

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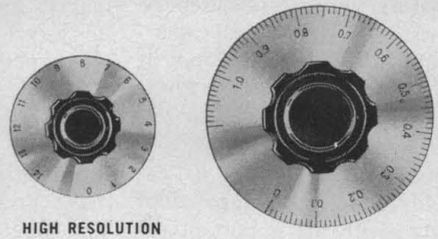

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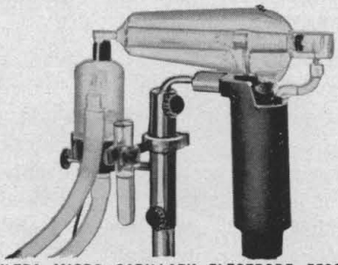

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their field of study is potentially the most dynamic of all. Too often they have been ignorant or even contemptuous of process, and to all appearances, involved mainly in the invention of complex and rather meaningless terminologies. But these taxonomists, anatomists, and ecologists do not express the essence of their specialties any more than does the molecular biologist who thinks all plants and animals are more or less identical except that they contain slightly different DNA's, or than the physiologist who has no knowledge of or interest in the functioning of the parts of his organism in any environment other than the laboratory incubator or the test tube.

For the society we live in to function and advance we need every encouragement, not only to biologists and other scientists, but also to musicians, artists, writers, sociologists, engineers, plain every-day working people, and others, with no peck-order intended. Similarly, all pertinent fields in biology must be encouraged if we are to maintain a healthy science and continue on really to understand and control the living world around us.

CHARLES C. DAVIS
Department of Biology,
Western Reserve University

Western Europe: Research and Development

I agree wih your general observations on the rapidly advancing state of research and development in Western Europe [*Science* **140**, 773 (17 May 1963)]. However, some of your comparisons regarding the present situation are probably not valid.

Commerce alone does not determine the relative technological position of nations, particularly when one of those nations has vastly different standards of external and internal modes of commerce. Your values for research costs in Europe are much too low. Perhaps the figure of one-fourth represents the situation as it was quite a number of years ago.

With respect to most of the parameters—size of the effort and generation of new ideas—the United States can certainly be said to be ahead of any nation in Europe. However, the Europeans have the advantage that they are seriously examining the question of the proper level of research and development expenditure in relation to eco-

nomic growth at a time when their research and development expenditures are still relatively low. Consequently, they may be able to make better use of future expenditures.

ARNOLD KRAMISH
Rand Corporation, 1000 Connecticut Avenue, NW, Washington 6, D.C.

Tribute to F. R. Moulton

I often wonder whether the present officers of the AAAS, to say nothing of its members, realize the extent of their indebtedness to Forest Ray Moulton, with whom I had the privilege of working in the Association from 1943, when he was 71, until 1948, when he retired. He died in 1952.

It is not my intention here to write a biographical sketch of Moulton. I merely want to point out that Moulton in his 70's was still an enormously strong and able man, and was absolutely devoted to the advancement of the AAAS. Perhaps if I called him the de Gaulle of American science, I would convey briefly a fairly accurate impression of his characteristics. Moulton was admirable, but to most people not lovable, and he could be almost ruthless in his drive to build up the AAAS. Unfortunately, I think, he scorned the art of social diplomacy and lived a rather lonely life. However, such a man was needed to conduct negotiations for the purchase of *Science* and the *Scientific Monthly* from the Cattell estate.

Today *Science* belongs to the Association through Moulton's efforts; the headquarters building of the Association has its present fine location at Scott Circle because Moulton selected and procured the site; the excellence of the AAAS symposium series stems from his personal editorial work; and the solvency of the Association during his period was assured by his careful, some would say penurious, fiscal management. Remember that his were the days before government support of science became prevalent, that he had been born in a log cabin in Michigan, and that his distinguished career in celestial mechanics at the University of Chicago was the result of his native ability and tireless personal efforts.

I think of Moulton as the most rugged individualist I have known—the builder of the AAAS during a critical decade of its history. As such, it would seem fitting to remember and honor his

name. Therefore, I propose that, at an appropriate time and with suitable ceremony, the headquarters building at 1515 Massachusetts Avenue be named Moulton Hall, and be so indicated on a plaque at the entrance.

FRANK L. CAMPBELL
National Academy of Sciences–National Research Council, Washington, D.C.

Scientist Reviewers Beware

A recent episode in professional reviewing, which has occurred in the present fever-heat atmosphere in which all discussions of race are being conducted, has highlighted a hazard about which I suspect many scientists, accustomed to reviewing for scientific journals, are not aware.

The episode in question, which stirred up a mare's nest of moral indignation, mutual recrimination, and accusation, resulted from the fact that Theodosius Dobzhansky followed a scientific reviewing ethic rather than a literary reviewing ethic when he wrote a critical review of Carleton Coon's book, *The Origin of Races*, at the request of the *Saturday Review*. In accordance with a practice of scientific courtesy, he sent a copy of his review manuscript to Coon. Coon responded by asking for the right to reply—again a correct response in the case of a review appearing in a scientific journal.

But in the case of a journal like the *Saturday Review*, it is incorrect to send a copy of the manuscript of a review anywhere else before the review has actually been published. Literary review journals have to guard against premature quotation by other publishers, and last-minute changes in makeup may mean that a review is not run at all.

The *Saturday Review*, in response to Coon's request, tried to arrange an interview with him, but by the time this was planned for, he had left for Europe. Meanwhile, another section of the *Saturday Review* had run some excerpts from the book.

Friends of Dobzhansky joined him in the belief that his review was being held up because of pressures against the review's content—an assumption that was not justified by the *Saturday Review's* record of liberalism. They began to write letters of protest, to which the *Saturday Review's* editors reacted with what they felt to be fully justified annoyance. As a result, the editors rejected

the review, which was in preparation for publication, and thus what had started out as a misunderstanding became a cause célèbre, in which the issues were still further clouded. Finally, the review itself, in an extended form, was published in the *Scientific American* ["A debatable account of the origin of races," *Sci. Am.* **208**, No. 2, 169 (1963)].

In investigating the whole affair I realized that, although I have reviewed for literary as well as for scientific journals all my professional life and would never send a review intended for a literary journal to anyone before its publication, nevertheless I had never articulated this rule.

As science comes closer to public issues and as scientists are asked to come out of their ivory towers of scientific reviewing, with its particular rules of scientific courtesy, it will be useful to remember that different sets of rules apply to the two kinds of reviewing. This is the more important in situations where technical difficulties may, quite unnecessarily, add fuel to the fires of legitimate controversy.

MARGARET MEAD
American Museum of Natural History, New York

Whales and Cows: Stomach Capacity

In the book review of *Whales* by E. J. Slijper [*Science* **140**, 166 (12 Apr. 1963)] it is stated in the center of column 3 that "the stomach of a domestic cow does not hold 55 gallons." Apparently there was much in Slijper's book to criticize, but the accuracy of this particular statement is not one of them.

The stomach of the cow may be considered to consist of four parts: the rumen, reticulum, omasum, and abomasum. According to Sisson and Grossman in *Anatomy of the Domestic Animals*: "The capacity of the stomach varies greatly depending on the age and size of the animal. In cattle of medium size it holds 30 to 40 gallons, in large animals 40 to 60, in small 25 to 35."

A critical review is a worthwhile contribution. However, a reviewer can do himself discredit as well as the author if he is inaccurate or hypercritical.

ARTHUR FREEMAN
American Veterinary Medical Association, 600 South Michigan Avenue, Chicago 5, Illinois

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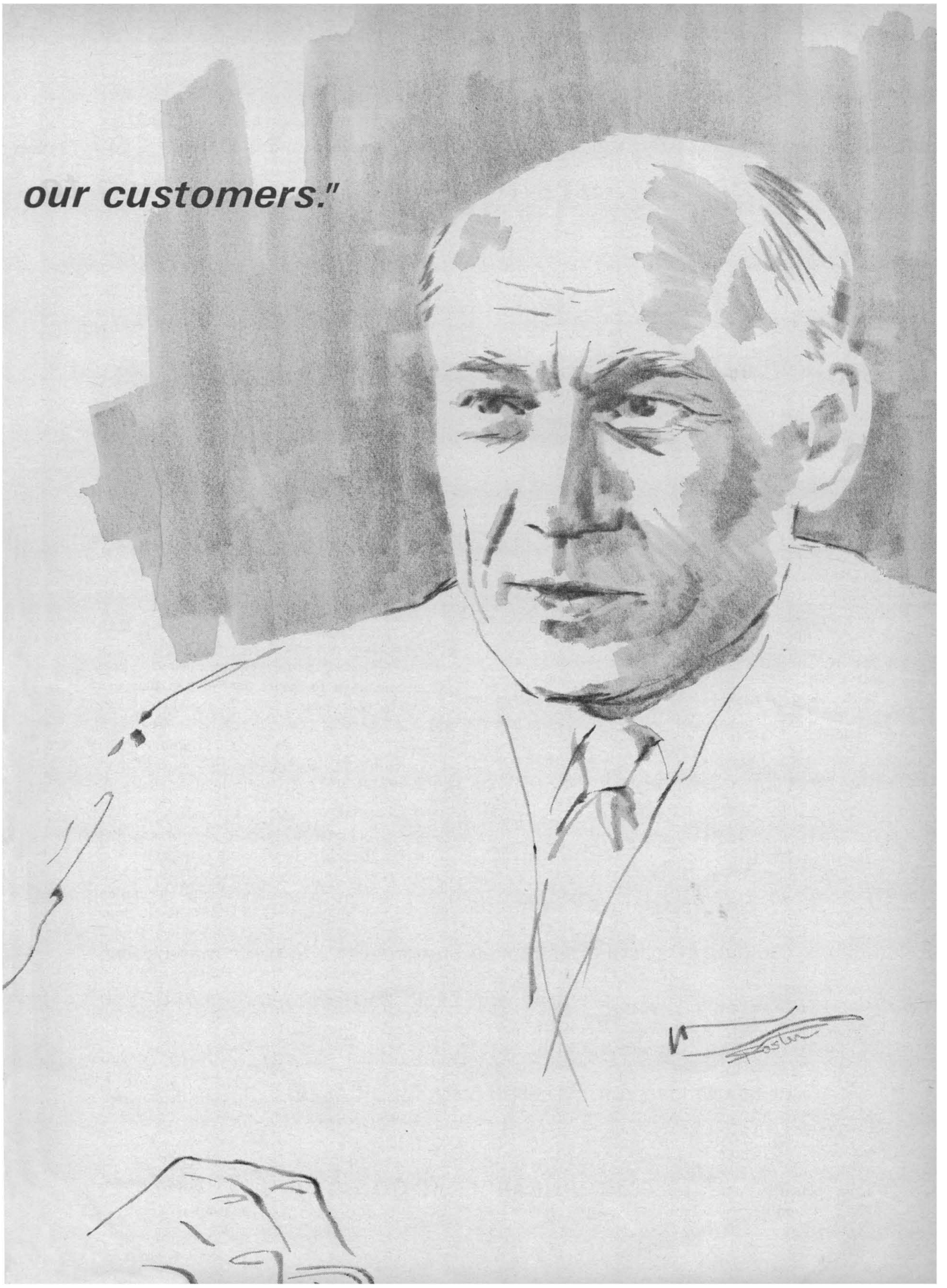
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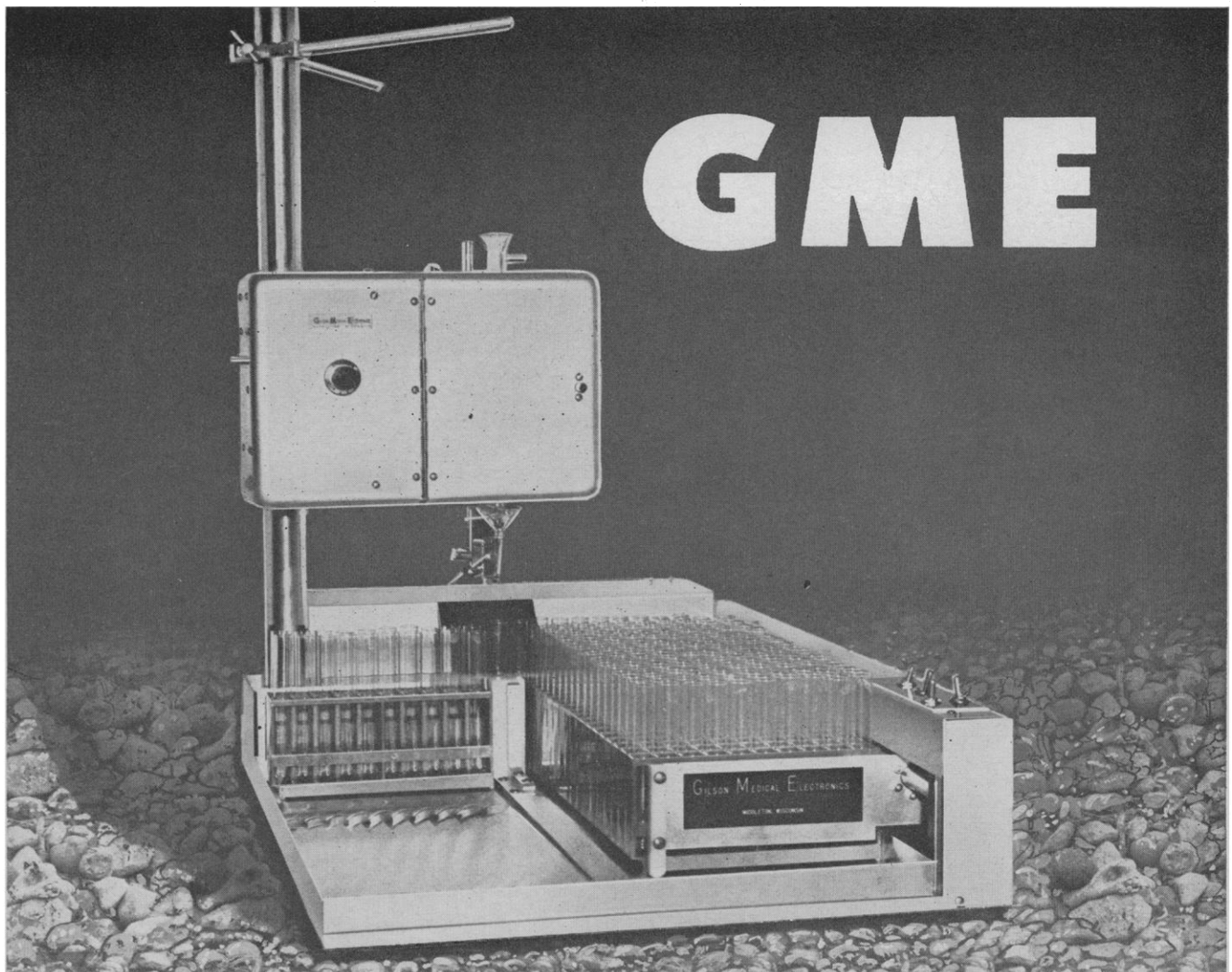

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GME LINEAR FRACTIONATOR

26 July 1963, Volume 141, Number 3578 **SCIENCE**

Information Transfer and Retrieval

Keeping informed of new research results is a matter of concern to all who are engaged in science or technology. However, the magnitude of the problem and the mechanisms employed for the transfer and retrieval of information differ widely, depending on the kind of activity involved. For those engaged in efforts at the leading edges of scientific discovery, information retrieval presents no great problem. For those engaged in technology, and especially those concerned with patents, a more serious difficulty exists, one which has been described as an information crisis. This has received attention from the President's Science Adviser, Jerome Wiesner, and is currently the concern of a committee in Congress headed by Representative Pucinski of Illinois.

In some areas of fundamental research there is no crisis, for jet travel and the telephone permit fast and complete interchange of information. Consider the procedures of scientists who are leaders in a field such as molecular biology. These men (or women) quickly become aware of each other's work and come to form an invisible college. They keep each other informed of progress through visits, telephone calls, letters, and mimeographed preprints of papers. By common consent they publish in a limited number of journals. While they participate to a degree in the large national meetings, their favorite place of meeting is the small, closed symposium.

Membership in the "college" is informal and is won on the basis of scientific contributions. Young men achieve it most readily by working in a laboratory where the senior workers already belong. There they have an opportunity to learn early of new developments and current ideas. Nevertheless, a man of sufficient competence and imagination, no matter where he is working, can achieve membership through excellence.

Men who are active in a fast-moving field know that only a limited number of workers are likely to make significant discoveries, and that they themselves can keep abreast of new developments if they are in close contact with those few. They also know that colleagues with whom they are not in contact, and even newcomers, will publish their findings in perhaps a half dozen journals. It is not even necessary for each individual to scan this limited number of publications, for he will learn through the "grapevine" of anything particularly significant.

Another advantage possessed by a member of the "college" is the ability to readily evaluate the work of others. Through his own judgment and through consultation with others he can quickly identify those who do highly imaginative, reliable work and be warned of those who are careless. It is also easy for him to spot and disregard those who talk about, and publish repeatedly, the same limited body of facts, or variants of them.

The attitude of those who have ready access to new information relevant to their activities and who can obtain evaluated material of prime significance was expressed by one molecular biologist, who told me, "If all of human knowledge could be put on a computer and I could press a button and get all the information on DNA, I doubt that I would ever touch the button."

For those who are not on the "grapevine" or who wish to apply the results of basic research, the problem is quite different, and a well-conceived machine system of information retrieval would be useful. To be of maximum value, however, such a system would have to possess the speed and some of the capacities of evaluation already enjoyed by members of the invisible colleges.—P.H.A.

and served to emphasize the difficulties involved in such studies and the necessity for a great number and a wide variety of measurements. These studies, including the investigation of adequate control populations in regions of lower natural radiation levels, have barely begun and it appeared clear that much more time and effort on the part of workers in many disciplines will be required to isolate any definitive environmental factors, of which natural radiation is only one.

The symposium was supported by the U.S. Atomic Energy Commission, Division of Radiological Health of the U.S. Public Health Service, and Rice University.

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Forthcoming Events

August

19–30. **Macromolecules**, statistical theory, seminar, Hanover, N.H. (Dean of Summer Programs, P.O. Box 833, Hanover)

19–31. **Geodesy and Geophysics**, 13th general assembly, Berkeley, Calif. (W. E. Smith, AGU, 1515 Massachusetts Ave. NW, Washington 5)

20–23. Western **Electronic** Show and Conf., San Francisco, Calif. (J. D. Noe, WESCON, 701 Welch Rd., San Francisco)

20–24. **Poultry Science** Assoc., Stillwater, Okla. (W. E. Shaklee, Cooperative State Experiment Station Service, USDA, Washington 25)

20–26. **Psychology**, 17th intern. congr., Washington, D.C. (American Psychological Assoc., 1333 16th St. NW, Washington 6)

20–26. **Zoological Nomenclature**, intern. committee meeting, Washington, D.C. (W. E. China, British Museum of Natural History, Cromwell Rd., London S.W.1)

20–27. **Zoology**, 16th intern. congr., Washington, D.C. (Secretary of the Congress, Natl. Acad. of Sciences, 2101 Constitution Ave., NW, Washington 25)

21–23. **Biochemical Conf.**, Pacific Slope annual, Honolulu, Hawaii. (P. E. Wilcox, Dept. of Biochemistry, Univ. of Washington, Seattle 5)

21–29. International Conf. on **Population**, Ottawa, Ont., Canada. (B. Benjamin, Intern. Union for the Scientific Study of Population, General Register Office, Somerset House, London W.C.2, England)

22–24. National Council of Teachers of **Mathematics**, Pittsburgh, Pa. (E. G. Begle, Stanford Univ., Stanford, Calif.)

24–25. **Transactional Analysis**, first summer conf., Monterey, Calif. (E. Berne, Box 5747, Carmel, Calif.)

25–28. **Soil Conservation** Soc. of America, Logan, Utah. (H. W. Pritchard, Soil Conservation Soc., 7515 Northeast Ankeny Rd., Ankeny, Iowa)

25–29. **Medical** Correctional Assoc., Portland, Ore. (F. L. Rouke, 14 Studio Arcade, Bronxville, N.Y.)

26–28. Simulation for **Aerospace Flight**, specialists meeting, Columbus, Ohio. (Inst. of the Aerospace Sciences, 2 E. 64 St., New York 21)

26–28. **Superconductivity**, intern conf., Hamilton, N.Y. (R. W. Schmitt, General Electric Research Laboratory, P.O. Box 1088, Schenectady, N.Y.)

26–29. American **Sociological** Assoc., Los Angeles, Calif. (T. Parsons, Dept. of Social Relations, Harvard Univ., Cambridge 38, Mass.)

26–30. American **Mathematical** Soc., 68th summer, Boulder, Colo. (Mrs. R. Drew-Bear, Special Projects Dept., AMS, 190 Hope St., Providence 6, R.I.)

26–30. **Rheology**, 4th intern. congr., Providence, R.I. (R. S. Rivlin, Brown Univ., Providence 12)

26–30. **Solar Spectrum**, intern. symp., Utrecht, Netherlands. (C. de Jager, Theoretical Dept., Sterrewacht, Servaasbolwerk 13, Utrecht)

26–31. **Haematology**, European Soc., 9th congr. Lisbon, Portugal. (Secretary, Haematology Congr., Dept. of Haematology, Inst. of Tropical Medicine, Lisbon)

27–30. **Alaskan Science** Conf., Anchorage. (A. H. Mick, Alaska Agricultural Experiment Station, Palmer)

27–30. American **Physiological** Soc., Coral Gables, Fla. (M. Edwards, Physiology Dept., Univ. of Miami School of Medicine, Coral Gables 34)

27–30. **Computing Machinery** Assoc., natl. conf., Denver, Colo. (F. P. Venditti, Univ. of Denver, Denver 10)

27–31. American Inst. of **Biological Sciences**, Amherst, Mass. (R. A. Jester, Dept. of Floriculture, Univ. of Massachusetts, Amherst)

27–4. **Automatic Control**, 2nd intern. congr., Basel, Switzerland. (A. von Schulthess, Wasserwerkstr. 53, Zurich 6, Switzerland)

28–31. **Electron Microscope** Soc. of America, 21st annual, Denver, Colo. (V. L. Van Breemen, Mercy Inst. for Biomedical Research, 2920 E. 16 Ave., Denver 6)

28–4. **British Assoc. for the Advancement of Science**, Aberdeen, Scotland. (Sir G. Allen, Burlington House, Piccadilly House, London, England)

29–30. **Solvation** Phenomena, symp., Calgary, Alberta, Canada. (P. J. Krueger, Dept. of Chemistry, Univ. of Alberta, Calgary)

29–31. **Pollen Physiology** and **Fertilization**, symp., Nijmegen, Netherlands. (H. F. Linskens, Dept. of Botany, Univ. of Nijmegen, Driehuizerweg 200, Nijmegen)

29–4. American **Psychological** Assoc., Philadelphia, Pa. (E. B. Newman, Memorial Hall, Harvard Univ., Cambridge 38, Mass.)

30–1. **Pancreatic Islets**, intern. symp., Uppsala, Sweden. (S. Brolin, Univ. of Uppsala, Uppsala)

30–2. Individual **Psychology**, intern. congr., Paris, France. (H. Schaffer, 28 rue des Archives, Paris 4)